Habitat specialisation in the Reed Parrotbill *Paradoxornis heudei*—evidence from its distribution and habitat use

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The Reed Parrotbill *Paradoxornis heudei* is found in habitats dominated by Common Reed *Phragmites australis* in East Asia. This project was designed to test whether the Reed Parrotbill is a specialist of reed-dominated habitats, using data collected through literature review and field observations. About 87% of academic publications describing Reed Parrotbill habitat report an association with reeds, and the species was recorded in reeds at 92% of sites where it occurred. On Chongming Island, birds were only recorded in transects covered with reeds or transects with scattered reeds close to large reedbeds. At the Chongxi Wetland Research Centre, monthly monitoring over three years also showed that the species was not recorded in habitats without reeds. The density of Reed Parrotbills was higher in reedbeds than mixed vegetation (reeds with planted trees) and small patches of reeds. The species rarely appeared in mixed habitat after reeds disappeared. These results confirm that the species is a reed specialist and highlights that conservation of reed-dominated habitat is a precondition to conserve the Reed Parrotbill.

INTRODUCTION

Habitat specialisation results in some species having a close relationship with only a few habitat types (Futuyma & Moreno 1988), and habitat specialists have some specific life-history characteristics, for example, they often have weak dispersal abilities (Krauss *et al.* 2003) making them sensitive to disturbance or fragmentation (Sol *et al.* 2002, Krauss *et al.* 2003, Cofre *et al.* 2007). Therefore, knowing if a species is a habitat specialist is important for predicting population distribution, understanding the relationship between life-history characteristics and habitat, and providing a basis for a species protection strategy (Futuyma & Moreno 1988, Julliard *et al.* 2006).

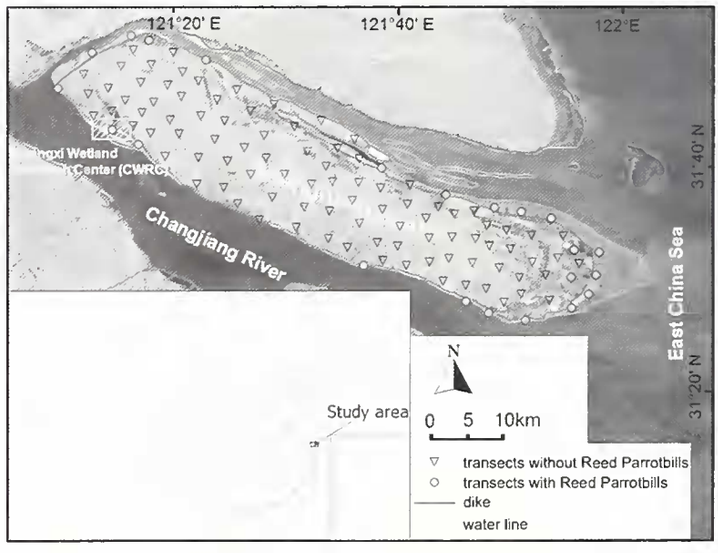
Reed Parrotbill *Paradoxornis heudei* is an insectivorous, resident species restricted to east China, east Mongolia and south-east Russia (MacKinnon & Phillipps 2000, Lei & Lu 2006, BirdLife International 2013). Two subspecies are recognised, *P. h. heudei* and *P. h. polivanovi*; subspecies *heudei* is mainly found in the middle and lower reaches of Changjiang and *polivanovi* is mainly found in north-east China (Lei & Lu 2006). It has been assumed that Reed Parrotbill's reedbed specialisation is responsible for its narrow distributional area and small population (BirdLife International 2013). This is partly because reedbeds in East Asia are threatened by commercial harvesting, wetland reclamation and sewage discharges, which have resulted in declines in the quality and area of beds, potentially threatening the Reed Parrotbill, and the species is classified as Near Threatened (BirdLife International 2013). Therefore it is important to understand the relationship between the Reed Parrotbill and the Common Reed *Phragmites australis* to understand species's life history characteristics and advance its conservation.

Most papers covering the species detail new distributional records and descriptions of breeding biology (Wang & Tian 1988, Bai & Bai 1993, Wang *et al.* 2011) and a few describe its ecology (Ma 1988, Xiong *et al.* 2007). Studies in a tidal reedbed in the Changjiang estuary found that Reed Parrotbills fed on insects on reeds all year round (Xiong *et al.* 2007) and that reed shoots made up more than 89% of the nest mass (Xiong & Lu 2013). In some papers, the Reed Parrotbill has been declared to be a reed-dominated habitat specialist (Xiong *et al.* 2007, Gan *et al.* 2009). However, habitat specialisation of the species has not been critically tested. In this paper, published and unpublished information on the distribution and habitat use of the Reed Parrotbill in China is reviewed, and two new field studies which test whether it is a reed-dominated habitat specialist are reported and discussed.

METHODS

Three sets of information on Reed Parrotbill distribution and habitat use were used: (1) distribution and habitat use data in the Chinese part of its range, collated from academic publications, web news, communication with birdwatchers and personal observations, (2) the distribution of the species obtained through transect observations on Chongming Island (Figure 1), one of its main strongholds, (3) three years monitoring Reed Parrotbill distribution in reed-dominated habitats (reedbeds, smaller reed patches, reeds with dense trees and reeds with sparse trees) and neighbouring habitats without reeds at Chongxi Wetland Research Centre (31.700°N 121.200°E), located on the west end of Chongming Island (Figure 1).

Figure 1. Location of Chongxi Wetland Research Centre, transects with and without Reed Parrotbills in Chongming island and the location of Chongming island in China.



Distribution and habitat use of the Reed Parrotbill in China

Online databases were searched—China Academic Journal (CNKI), ISI Web of Science, Biological Abstracts and BIOSIS Previews. The references in papers already retrieved and previous review articles about the Reed Parrotbill were checked. The internet was searched, birdwatchers contacted and personal records were also included for new distributional records of the species (Table 1). The final online search was conducted in August 2012. The following information was collated: locations where Reed

Parrotbills have been recorded (province and sites or region), dates of records and descriptions of habitat use, paying special attention to whether this included reed vegetation.

All sites in China where Reed Parrotbills have been recorded were mapped, distinguishing sites where they were only recorded before 1980 from sites where they only occurred after 1980 and sites where they were present both before and after 1980. Records of habitat use by the species were analysed, using reports in academic publications and sites where Reed Parrotbills were recorded. As there are few records before 1980, habitat use analysis was focused on those after 1980. The proportion of publications with descriptions of vegetation type and the proportion of publications indicating that Reed Parrotbill used reed vegetation were determined, as was the percentage of recording sites for which descriptions of vegetation were available and the percentage of recording sites where reed vegetation was present. Published habitat use reports and site records repeated in edited books, review articles and bird lists (Cheng 1987, Zheng 2005, Lei & Lu 2006) were not duplicated in these analyses.

Distribution of Reed Parrotbills at Chongming Island

Chongming Island, about 1,200 km^2 in area, the largest alluvial island in the world, is located in the Changjiang estuary (Figure 1). The intertidal wetland and the adjacent newly reclaimed area on the island includes about 4,590 ha of reed vegetation (Huang *et al.* 2005). The island was divided into 10 km^2 grid-squares with one transect located in each square and a total of 118 transects (excluding some which were inaccessible) were visited once in August 2005 (Figure 1). Each transect covered 10 ha, and they varied in length from 1 to 2.5 km and from 40 m to 100 m in width. The number of Reed Parrotbills and the vegetation they were using were recorded.

Habitat selection of Reed Parrotbills at Chongxi Wetland Research Centre

The Chongxi Wetland Research Centre supports a 3 km^2 tidal marsh dominated by monospecific stands of Common Reed (reedbeds) along the estuary. There were also two types of forested wetlands by the dyke along the estuary: (1) reeds with dense trees mostly *Salix matsudana*, planted in winter 2003; during 2004 and 2005, the trees and Common Reeds grew together, but by 2006 the trees were much taller than the reeds, which died back during 2007, and (2) reeds with sparse trees, planted in winter 2005. These trees were located among reedbeds as patches, enabling trees and reeds to coexist (Liu *et al.* 2009). There were also patches of Common Reed near the main reedbeds and close to open water. From 2006 to 2008, these patches of reeds expanded and merged forming reedbeds. Other habitats present included protective forest-belts, aquaculture ponds, and farmland inside the estuary dyke; there were no reeds in these habitats.

From 2006 to 2008, all the above areas were surveyed for Reed Parrotbills monthly, using six fixed transects, controlled to cover about 1 ha each, with point counts located along the transects in each area of habitat. The species has a far-carrying call, but it proved difficult to estimate the distance of birds that could not be seen, so in order to reduce the resulting bias in detection between seasons and areas, individuals that were only heard were excluded. Non-parametric tests were used to test for differences in Reed Parrotbill densities in different habitats.

RESULTS

Distribution and habitat use of the Reed Parrotbill in China

Before 1980, the species was reported at only a few sites (Table 1, Figure 2), mainly by foreign scholars. Since 1980, it has been reported more widely (Table 1, Figure 2). The known distribution has expanded from sites in Jiangsu, Jiangxi and Zhejiang provinces to over 60 sites in 10 provinces (Figure 2), but there have been no records since 1980 from Jiujiang city near Poyang Lake in Jiangxi province, Hangzhou ciry in Zhejiang province or Jiangyin city in Jiangsu province, where they had previously been recorded (Gould 1874, Gee *et al.*1929, Shaw 1934, Rank 1989). In the Chinese part of its range, the species mainly inhabits coastal, lakeside and riverside wetlands where the Common Reed is found. Some early publications indicated that the species was recorded in reeds (David 1872, Lynes 1914, Gee & Moffett 1917, Table 1).

Of the 37 academic publications published after 1980 examined in the study, 31 mentioned the vegetation used by Reed Parrotbills, 27 indicating that the species used reeds or reed-dominated vegetation. The other four indicated that the species used habitats that included 'farmland and protective forest-belts near residential area' (Su *et al.* 1987), 'dense bushes near stream and marsh' (Hou

Figure 2. Distribution of Reed Parrotbill in China. See Table 1 for details of marked sites.

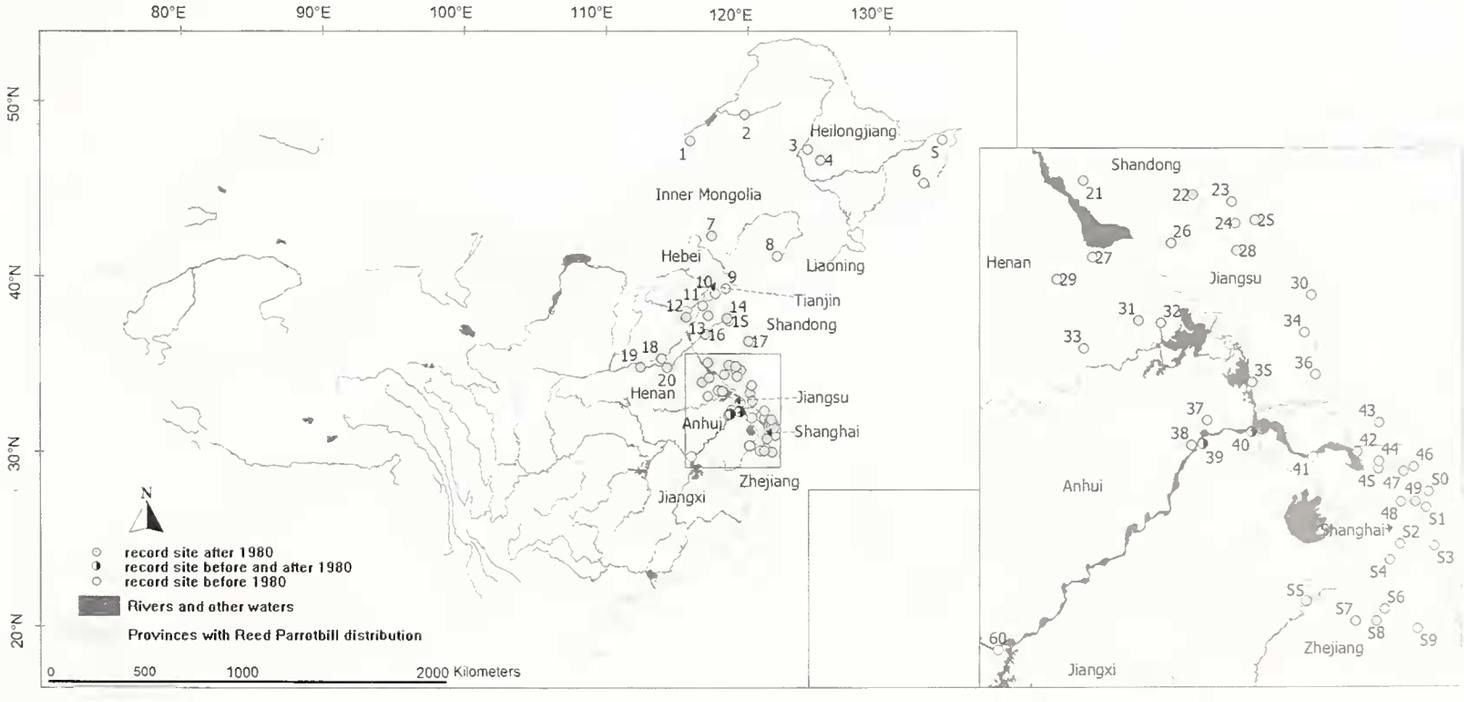


Table 1. Records and habitat use of the Reed Parrotbill in China.

Province	Sites or region	Description of habitat	Recording year	Source	Site
Records before 1980					
Jiangsu province	Along Changjiang river between Nanjiang & Zhenjiang	'the reed-beds cover a total area of about 200 square miles' 'outside the reed-bed zone the species has never been observed and almost certainly does not occur'	ns	Lynes 1914	
	Jiangyin	Unknown	Unknown	Gee *et al.* 1929 (see Rank 1989)	41
	Nanjing city	Reed vegetation 'a few reed-covered islands on the Yangtze in the neighborhood of Nankin'	1871 ns	David 1872 Styan 1891	39
	Zhenjiang city	'very common in winter in the reed-beds a few miles below Chinkiang', 'in the bare reed-fields after the crop has been cut, and in bushes and trees in the vicinity'	ns	La Touche 1906	40
Jiangxi province	Jiujiang city	Unknown	Unknown	Gould 1874 (see Rank 1989)	60
Unsure	East China	ns	ns	La Touche 1925	
	Middle China	'Resident in the reed beds along the Yangtse River'	ns	Gee & Moffett 1917	
Zhejiang province	Yunsi, Hangzhou	'It frequents bamboo thickets and Ilex, the so-called Tung Ching shrubs'	1932	Shaw 1934	55
Records after 1980					
Anhui province	Donghu Wetland Park, Huaibei city	Reed vegetation	Jan 2010	Wang *et al.* 2011	29
	Shilonghu Wetland Park, Suzhou, Sixian county	Reed vegetation	Mar 2011	Wang *et al.* 2011	31
	Tuohu Wetland Nature Reserve, Bangbu, Wuhe county	Reed vegetation in lakeside of Tuohu lake	May 2006 & Feb 2009	Zhou 2010	33
Hebei province	Hengshuihu NNR, Hengshui city	Wetland with reed vegetation Agricultural areas and artificial forest Reed bed, meadow and bushes	Jun 2007 Oct 2001–Dec 2006 Oct 2001–Sep 2002	Lin *et al.* 2008 Han *et al.* 2007 Gao 2003	12
	Nandagang wetland, Cangzhou	Reed marshes	Mar 2001–Jul 2003	Zhang 2004	11
	Saihanba National Forest Park, Weichang, Chengde	Dense bushes near stream and marsh ns	Jun 1992 Jun 1992	Hou *et al.* 1997a Hou *et al.* 1997b	7
	Tanghai county	Reed vegetation	Feb 2009–Oct 2011	Han *et al.* 2011	9
Heilong-jiang province	Honghe NNR, Jiamusi	ns	ns	Ai *et al.* 2001	5
	Longfeng wetland nature reserve, Daqing	Reed vegetation	May 2008	Pers. obs.	4
	Xingkaihu NNR, Jixi	Reed vegetation	May 2008	Pers. obs.	6
	Zhalong NNR, Qiqiha'er	Farmland and protection forest near agricultural area Common in reed vegetation Reed marshes	1983–1986 May 1996 May 2005	Su *et al.* 1987 Li *et al.* 1998 Kong 2006	3
Henan province	Huanghe Wetland, Xinxiang	ns	Jan 2012	Web news	18
	Yellow River riverside, Kaifeng	ns	Oct 2009	Pers. comm.	20
	Yellow River Wetland NNR, Mengjin, Luoyang	Reed vegetation in bank of Huanghe River east to the Huanghe highway	Jan 2006	Niu 2007	19
Inner Mongolia	Huihe NNR, Ewenke Qi, Hulunbei'er	Riverside wetland in Huihe district	ns	Lu 1990	2
	Wulannuoer reservoir, New Barag Youqi, Hulunbei'er	ns	Sep 2008	Pers. comm.	1
Jiangsu province	Yancheng, Dongtai county	ns	Apr 2010	Pers. comm.	36
	Lianyungang, Ganyu county	ns	Sep 2009	Pers. comm.	23
	Gaoyou Lake, Yangzhou, Gaoyou county	ns	Jul 2012	Web news	35
	Lianyungang, Guangyun county	ns	May 2010	Pers. comm.	28
	Nantong, Haimen county	Reed vegetation along the Changjiang River	Aug 2007	Pers. obs.	44
	Haizhou district, Lianyungang	Shallow water area with short reed shoots Reed vegetation in low land	1985–1987 Jul 1986	Wang & Zhou 1988 Wang 1990	25
	Hongzehu Wetland NNR, Sihong, Suqian	Reed vegetation Riverside and reed vegetation in south Hongze lake ns	Jul 2005–May 2006 2005–2007 2003–2004	Ji 2007 Tang 2007 Zhai *et al.* 2008	32

Table 1 ... continued.

Province	Sites or region	Description of habitat	Recording year	Source	Site
	Lianyungang	Reed vegetation in tidal flat along coast, reed vegetation in ponds, in scattered reed vegetation along the canal and near the farm house after reed cutting	1984–1986	Wang & Tian 1988	24
	Liuhe district, Nanjing	Reed vegetation along Changjiang River	Sep 2011	Pers. obs.	37
	Luomahu reservoir, Xinyi, Xuzhou	ns	1984–2005	Feng *et al.* 2006	26
	Nanjing	Reed along the Changjiang River	Sep 2011	Pers. obs.	39
	Nantong	Reed vegetation along the river and coast	Apr 2003	Pers. obs.	42
	Pukou district, Nanjing	Reed vegetation along Changjiang River	Sep 2011	Pers. obs.	38
	Nantong, Qidong county	Reed vegetation along the coast	Apr 2003	Pers. obs.	46
	Nantong, Rudong county	ns	Apr 2010	Pers. comm.	43
	Yancheng, Sheyang county	ns	Apr 2008	Pers.comm.	30
	Xinglong Is,Nantong Qidong county	Bushes along the dyke	Nov 1990–Feb 2002	Zhao *et al.* 2004	47
	Xuzhou	ns	Jul 1985	Zou & Qin 1989	27
	Yancheng	Reed vegetation in the tidal flat Reed vegetation in tidal flat, along the river & ponds	Mar 1983 1986–1988	Wang & Tian 1988 Shi & Cui 1989	34
	Zhenjiang	ns	Jan 2012	Web news	40
Liaoning province	Shuangtaizi Hekou NNR, Panjin	Reed marsh in Dongguo Reed vegetation	Apr 1991 Jul 2005	Jin *et al.* 1991 Pers. obs.	8
Shandong province	Daguhe estuary, Jiaozhou	ns	Jul 2012	Web news	17
	Huanghe Delta NNR, Dongying	Marshes with reed vegetation and *Tamarix* vegetation	1997	Zhu *et al.* 2001	15
	Huanghe Forest Park, Jinan	ns	Dec 2007	Pers. comm.	16
	Zaozhuang, Tengzhou county	ns	Aug 2011	Web news	21
	Dongying , Kenli county	ns	Aug 2007	Pers. comm.	14
	Dezhou, Leling, Linyi, Linmu county	ns Reed vegetation	Feb 2010 1989	Pers. comm. Bai & Bai 1993	13 22
Shanghai	Changxing Island, Chongming county	Reed vegetation along the coast	2002–2011	Pers. obs.	49
	Chenhang reservior, Baoshan district	Reed vegetation along the coast	Nov 2006	Pers. obs.	48
	Chongming Dongtan Birds NNR, Chongming county	Reed vegetation along the coast Found only in reed vegetation zone 'the dominant species in the *Phragmites* and *Spartina-Phragmites* habitats, accounting for 49 & 29% of the total numbers recorded in the two habitats' *Phragmites* habitat, *Spartina-Phragmites* habitat and *Spartina* habitats *Phragmites* vegetation and *Spartina* vegetation	Sep 1984 Spring 2003 Spring 2008 Nov 2008–Mar 2009 Winter 2004 & 2005	Ma & Sun 1988 Xu *et al.* 2006 Gan *et al.* 2009 Dong *et al.* 2010 Gan *et al.* 2010	50
	Chongxi Wetland Reserch Center, Chongming county	Reed vegetation Reed vegetation	Jan–Apr. 2007 Dec 2005–Nov 2006	Xiong *et al.* 2007 Xiong & Lu 2008	45
	Fengxian district	Tidal flat with reed vegetation along the coast Tidal flat with reed vegetation along river and coast	Apr 1983 1985–1986	Ma & Sun 1988 Ma 1988	52
	Hengsha Island, Chongming county	Reed vegetation along the coast	2002–2011	Pers. obs.	51
	Jinshan district	Reed vegetation along the coast	Apr 2006	Pers.obs.	54
	Jiuduan Shoal*	'99.3% of Reed Parrotbill preferring reed vegetation'	Nov 2003–Feb 2004	Ma *et al.* 2007	
	Pudong district	Reed vegetation near Luchao port	Jan 1984	Ma & Sun 1988	53
Tianjin	Lushandao, Qilihai and Beidagang	Reed vegetation near rice paddy and ponds	1995,1998,1999	Wang *et al.* 2002	10
Zhejiang province	Hangzhou Bay National Wetland Park, Ningbo Cixi county	Reed vegetation along the Hangzhou Bay	Sep 2005	Pers. obs.	56
	Shaoxing, Shangyu county	Reed vegetation along Qiantangjiang river	Sep 2009	Pers. obs.	57
	Ningbo, Yuyao county	Reed vegetation along Qiantangjiang river	Sep 2009	Pers. obs.	58
	Zhenhai district, Ningbo	Reed along the coast wetland	Sep 2009	Pers. obs.	59

'Unknown' means that authors did not read the reference and were not sure about this item.
*Ma *et al.* (2007) indicated that they observed many Reed Parrotbills in Jiuduan Shoal (271 individuals in total) in winter 2003. However, the author and the staff of Jiuduansha National Nature Reserve did not find any Reed Parrotbills in Jiuduan Shoal during our field work from July 2009 to April 2010 in this new island.
NNR=National Nature Reserve.
ns = 'not stated in source'.

et al. 1997a), 'bushes along the sea dike' (Zhao *et al.* 2004) and 'dense bushes near streams and marshes' (Han *et al.* 2007).

The species has been recorded in 57 localities since 1980 in academic publications (26 sites), our observations (16 sites), personal communications (10 sites) and internet news (5 sites) (Table 1). In 39 of the 57 sites or areas, the habitat types were described and in 36 of them the habitat used by Reed Parrotbills was reeds or reed-dominated vegetation.

Distribution of Reed Parrotbills at Chongming Island

A total of 625 Reed Parrotbills was recorded in 22 transects (Figure 1). Nineteen of these transects were in intertidal mudflats and the other three in newly reclaimed areas close to intertidal mudflats.

All the birds were recorded in reeds. Transects in intertidal mudflats were covered with reedbeds and those in newly reclaimed areas had reeds scattered around aquaculture ponds or in planted woodland. No Reed Parrotbills were recorded in the remaining transects, which included farmland, riversides, residential areas, woodlands and aquaculture ponds away from the intertidal mudflats. These transects either had no reedbeds or only had small patches of reeds isolated from larger reedbeds.

Habitat selection of Reed Parrotbills at Chongxi Wetland Research Centre

During three years observation, no Reed Parrotbills were recorded in areas without reed vegetation (farmland, aquaculture ponds and protective forest belts). The species was only recorded in areas with reed vegetation: including reedbeds, reeds with dense trees (RDT), reeds with sparse trees (RST) and patches of Common Reeds (PCR). In these areas, Reed Parrotbills was recorded almost year round (Figure 3). There were significant differences in Reed Parrotbill density between the four types of reed habitat (Friedman test, Chi-square = 60.729, df = 3, $P<0.001$). Wilcoxon Signed Ranks Test indicated that Reed Parrotbill density in reedbeds was significantly higher than in PCR, RDT and RST (all $P< 0.01$), but there were no significant differences among PCR, RDT and RST (all $P> 0.05$). In RDT, the Reed Parrotbill was not recorded after May 2007 when the reeds died back, but it was recorded in almost all months in RST (Figure 3), indicating that presence of the Common Reed is a necessary precondition for survival of the Reed Parrotbill.

DISCUSSION

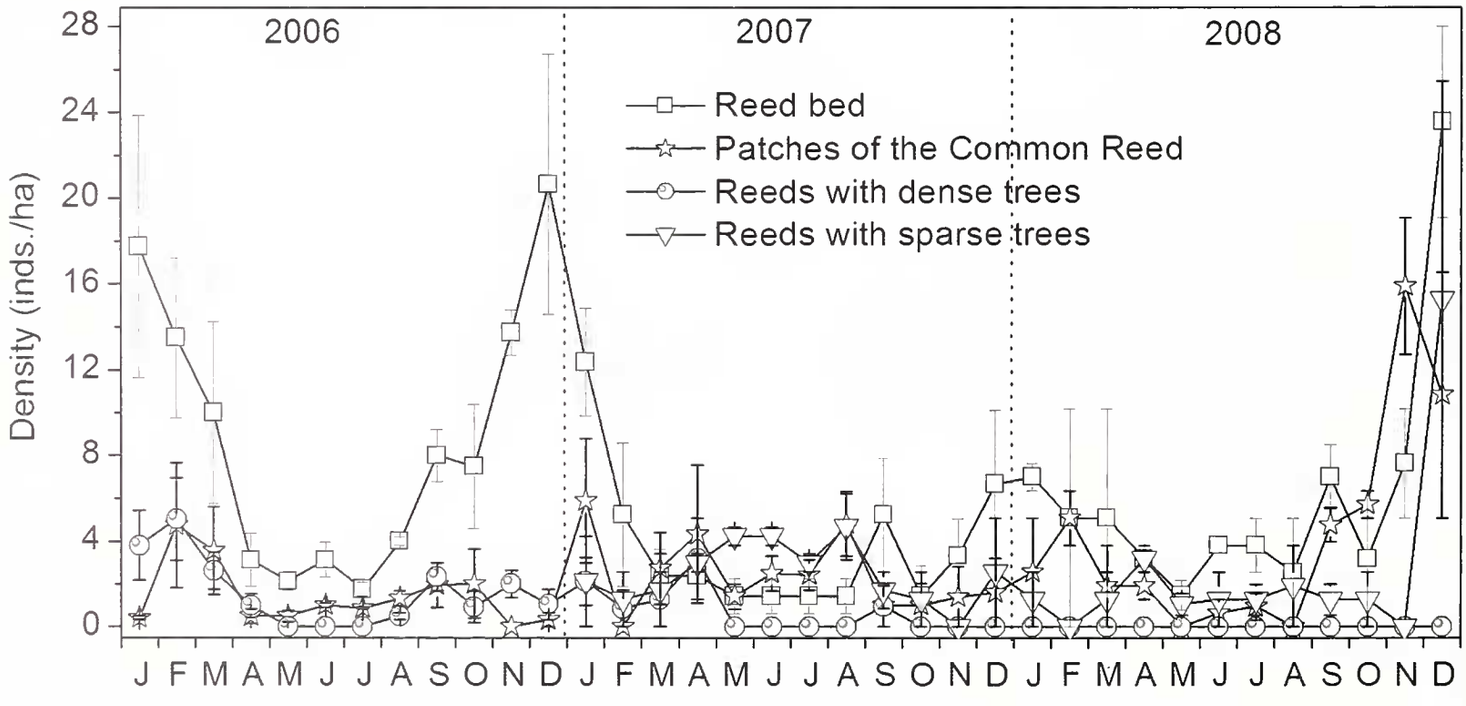
The use of reed vegetation by Reed Parrotbills is reported frequently in published literature. These reports, combined with the observations from Chongming Island, indicate that the species uses reedbeds or reed-dominated vegetation as habitat throughout its Chinese distribution. Detailed local observations at Chongming Island and Chongxi Wetland Research Centre also indicated that the species was almost exclusively associated with reeds and that birds were not found in nearby areas without reeds. It was concluded that the Reed Parrotbill is a reed-dominated habitat specialist.

The species's distribution map for China (Figure 2) includes many new records. In the south, the range extends to the southern shore of Hangzhou Bay but the northern extent cannot be determined yet, as there are records of Reed Parrotbills in south-east Russia. This study revealed that the species has a larger range than previously thought. Further changes to the known range are anticipated, as research and birding activities increase.

At Chongxi Wetland Research Centre, when reed shoots disappeared from mixed vegetation, Reed Parrotbills were rarely recorded in the reed-free vegetation. They were unable to persist in these areas by utilising more distant patches of reeds and disappeared along with the reeds. This implies that the species is dependent on reed vegetation and this dependence on reeds might constrain their ability to use other vegetation in the absence of reeds. There are published accounts of Reed Parrotbills using non-reed vegetation close to large areas of reeds (Su *et al.* 1987, Hou *et al.* 1997a, Zhao *et al.* 2004, Han *et al.* 2007). The species has been observed using bushes and woodland close to reeds when the reed-vegetation was disturbed by, for example, reed harvesting (La Touche 1906, Wang & Tian 1988). In the absence of disturbance, birds occasionally visit nearby non-reed vegetation, for example *Spartina*, but the number of individuals and their density were much lower than in reeds (Dong *et al.* 2010, Gan *et al.* 2010). Birds evidently disperse readily into non-reed vegetation near reeds, but it is not known whether they use resources within the non-reed vegetation or make only transitory visits. Birds visiting *Spartina* close to reeds only spent very short periods of time there (Dong *et al.* 2010).

Records of the species in non-reed vegetation indicate that the degree of habitat specialisation is not fully understood. It is

Figure 3. Monthly variation of Reed Parrotbill density (±SE) in reedbeds, reed patches, reeds with dense trees and reeds with sparse trees during 2006 to 2008, at Chongxi Wetland Research Centre.



important to understand the relationships between the species and the reed vegetation. Studies have shown that Reed Parrotbills feed on insects, insect eggs and larvae on reed shoots year round, in a tidal marsh in Changjiang Estuary (Xiong *et al.* 2007, 2010). The species may have special morphological adaptations in its bill, which facilitate breaking reed stems to retrieve insects within (Xiong *et al.* 2010) but which compromise its ability to use food resources in other vegetation. Similar extreme specialisation is seen amongst the bamboo-specialist insectivores, which feed on insects in, on and around living bamboo (Cockle *et al.* 2009). Although the Reed Parrotbill is limited to reed vegetation and it feeds on insects in and on reeds (Xiong *et al.* 2007), it is not yet certain that their prey is also restricted to reed vegetation.

It is not known whether the two recognised subspecies differ in habitat use or other life history characteristics. Subspecies *heudei* occurs on Chongming Island, where the fieldwork was carried out. At sites where *polivanovi* is found, such as Zhalong National Nature Reserve (site 3 in Figure 2), Longfeng Wetland Nature Reserve (4) and Xingkaihu National Nature Reserve (6), the Reed Parrotbill habitat was described as reed vegetation or reed marsh. Thus, it seems likely that the two subspecies have the same habitat requirements.

CONCLUSIONS

This review of Reed Parrotbill distribution in China revealed that its range and the number of locations where it occurs are larger than previously thought. This does not indicate an improvement in the conservation status of the Reed Parrotbill, as the study also confirmed the species's strict habitat specialisation. Given that existence of Common Reeds is a precondition for Reed Parrotbills to survive, more attention must be paid to the conservation of reed-dominated habitat, such as coastal wetlands, lakeside wetland and marshes, and corridors in reed-dominated habitats should be designed and maintained to reduce the effects of habitat fragmentation.

Corridors might also be useful to link areas of reedbeds without Reed Parrotbill populations to nearby locations that are already populated and this could be used in the selection and development of protected areas.

It would be useful to learn more about how the Reed Parrotbill uses and has adapted to reed vegetation, to help understand the evolutionary history of the species and likely threat mechanisms. The distribution of Reed Parrotbills may be predicted based on its strong relationship to the Common Reed. Large areas of reed vegetation close to or linked by corridors to reed vegetation with Reed Parrotbill populations could be potential habitat.

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